## MSI Cyborg 15 A13VE-681FR Intel® Core™ i5 i5-13420H Laptop 39,6 cm (15.6") Full HD 16 GB DDR5-SDRAM 512 GB SSD NVIDIA GeForce RTX 4050 Wi-Fi 6E (802.11ax) Windows 11 Home Black

Brand : MSI

Design

Product family: Cyborg

Article code: CYBORG 15 A13VE-681FR

Product name : Cyborg 15 A13VE-681FR

MSI Cyborg 15 A13VE-681FR. Product type: Laptop, Form factor: Clamshell. Processor family: Intel® Core ™ i5, Processor model: i5-13420H. Display diagonal: 39,6 cm (15.6"), HD type: Full HD, Display resolution: 1920 x 1080 pixels. Internal memory: 16 GB, Internal memory type: DDR5-SDRAM. Total storage capacity: 512 GB, Storage media: SSD. On-board graphics card model: Intel® UHD Graphics, Discrete graphics card model: NVIDIA GeForce RTX 4050. Operating system installed: Windows 11 Home. Product color: Black

Colour name	Translucent Black	Number of built-in speakers	2
Product type *	Laptop	Speakers manufacturer	Nahimic
Product colour *	Black	Speaker power	2 W
Form factor *	Clamshell	Built-in microphone	J
Market positioning	Gaming	Camera	
Display		Front camera	1
Display diagonal *	39.6 cm (15.6")	Front camera HD type	HD
Display resolution *	1920 x 1080 pixels	Video capturing speed	30 fps
Touchscreen *	× Full HD	Network	
HD type LED backlight Native aspect ratio Maximum refresh rate	✓ 16:9 144 Hz	Top Wi-Fi standard * Wi-Fi standards Mobile network connection *	Wi-Fi 6E (802.11ax) Wi-Fi 6E (802.11ax) ×
Processor		WLAN controller model WLAN controller manufacturer	Intel Wi-Fi 6E AX211 Intel
Processor manufacturer * Processor family * Processor generation Processor model * Processor cores	Intel Intel® Core™ i5 13th gen Intel® Core™ i5 i5-13420H 8	Ethernet LAN Ethernet LAN data rates Bluetooth Bluetooth version	✓ 10,100,1000 Mbit/s ✓ 5.2
Processor boost frequency	4.6 GHz	Ports & interfaces	
Performance cores Efficient cores	4	USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity *	2
Performance-core Max Turbo Frequency	4.6 GHz	USB 3.2 Gen 1 (3.1 Gen 1) Type-C ports quantity *	1
Efficient-core Max Turbo Frequency	3.4 GHz	Ethernet LAN (RJ-45) ports	1

Audio





3.6 GHz

12 MB

Smart Cache

Efficient-core boost frequency

Processor cache

Processor cache type

HDMI ports quantity \*

Combo headphone/mic port

HDMI version

1

1

2.1

Processor		Ports & interfaces	
Configurable TDP-down	35 W	Charging port type	DC-in jack
Processor base power	45 W	USB Type-C DisplayPort Alternate Mode	✓
Maximum turbo power	95 W	Performance	
Memory		Motherboard chipset	Intel HM670
Internal memory * Internal memory type Memory clock speed	16 GB DDR5-SDRAM 5200 MHz	Repairability index	8.1
		Keyboard	
Memory form factor	SO-DIMM	Pointing device	Touchpad
Memory slots	2x SO-DIMM	Numeric keypad *	
Maximum internal memory *	64 GB	Keyboard backlit	
Storage		Keyboard backlit colour	Blue
Total storage capacity * Storage media * Total SSDs capacity Number of SSDs installed SSD capacity SSD interface NVMe	512 GB SSD 512 GB 1 512 GB PCI Express 4.0	Island-style keyboard	<ul> <li>Image: A second s</li></ul>
		Software	
		Operating system installed *	Windows 11 Home
		Processor special features	
		Intel VT-x with Extended Page Tables (EPT)	1
SSD form factor	M.2	Execute Disable Bit	1
Optical drive type *	×	CPU configuration (max)	1
		Embedded options available	×
<b>Graphics</b> Discrete GPU manufacturer	NVIDIA	Intel Virtualization Technology for Directed I/O (VT-d)	1
Discrete graphics card model * Discrete graphics card memory	NVIDIA GeForce RTX 4050 6 GB	Intel Virtualization Technology (VT- x)	1
Discrete graphics memory type	GDDR6	Battery	
On-board graphics card *	<i>v</i>	Number of battery cells	3
Discrete graphics card *	✓	Battery capacity *	53.5 Wh
On-board graphics card family	Intel® UHD Graphics	Power	
On-board graphics card model *	Intel <sup>®</sup> UHD Graphics	AC adapter power	120 W
Audio		Security	
Audio system	Nahimic 3	Cable lock slot	1
		Weight & dimensions	
		Width	359.4 mm
		Depth	250.3 mm
		Height (front)	2.19 cm

Height (rear) Weight \* 2.29 cm

1.98 kg



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